cadavers were in no way different from that just described except that in the absence of a specially constructed box an autopsy head-block was used. Post-operative dissections of all four knees were made. The first subject was a well-grown boy of twelve years. In the first knee attacked, a true epiphyseal separation resulted, but the edge of the head-block must have been too sharp, for subsequently a small intra-articular fissure was discovered in the cartilage of the internal condyle.

The other leg of this subject met with an accident. The internal condyle was permitted to slip downward off the head-block. This was observed too late to prevent a fracture just above the condyles—a typical supracondylar osteoclasis.

The operations upon the second cadaver, a boy of fifteen years, were attended with complete success. In each instance, the separation occurred in the epiphyseal line, and was unaccompanied by injury to any other structure.

The dissections of the first, third, and fourth legs, that is, those in which a true epiphyseal separation had occurred, showed that the periosteum had become separated from the bone for a distance of 1 to 2 centimeters above and below the epiphyseal separation. It had remained unbroken, however. In the second, the fracture had taken place exactly at the junction of the condyles with the shaft. It was a clear transverse break, except for a tooth-like process half a centimeter long which appeared in the median line of the anterior aspect of the upper fragment. In this case the periosteum was broken on the outer side of the fracture.

In no instance was the epiphysis of tibia or fibula injured.

A few days later, a twelve-year-old girl was operated upon by the writer at the klinik of Prof. Lorenz. On the right side the usual supracondylar osteoclasis was performed; on the left side, which presented the greater deformity, Panzeri's operation was carried out. On examination and comparison of results a verdict was given for the latter operation. It is still the operation of preference in that klinik and is employed in a rather broader group of cases than that for which it was advocated by Prof. Panzeri.

A REPORT OF THE FIRST TWO HUNDRED CONFINEMENTS AT THE SAN FRANCISCO MATERNITY*

By ALFRED BAKER SPALDING, M. D., San Francisco.

Before the opening of the San Francisco Maternity, the medical students of San Francisco received an incomplete training in practical obstetrics, that important branch of medicine which so often forms the basis of their future practice. Formerly many students graduated from the local medical colleges before they had made their first antepartum examination, before they had attended a woman in confinement, and before they had visited a puerperal patient or changed a baby. Some even, as can be verified by questioning local practitioners, graduated and were admitted to practice by the state examining boards before they had even witnessed a confinement!

It is interesting to trace the cause for this long-continued failure on the part of the medical colleges to properly train their students in such an important branch of practice. The matter became of particular interest to the writer some years ago when he was placed in charge of the obstetrical department of the University of California. A year was spent in studying the situation, in writing and questioning teachers, practitioners, students and the associated charities. In this way the following facts were ascertained:

(1) It costs more to properly equip and maintain an obstetrical dispensary that the students can pay.

(2) The classes of the local medical colleges are not large enough for any one college to furnish enough students to run a dispensary the year round, unless the student should slight his other work.

(3) The faculties of some of the colleges hesitated to add to the already too large number of free dispensaries, from fear of injuring the local practitioners.

(4) A certain class of physicians, and especially midwives, are willing to confine women for fees ranging from five to ten dollars.

(5) The associated charities, the settlement workers and the dispensaries run by various charitable organizations have always been able to obtain physicians to care for their obstetrical patients in return for the experience it gives them, for the opportunity they have to increase their private practice, and for the occasional surgical patient they secure for operation.

(6) The various charities considered it immodest to allow students to assist in the deliveries, and some feared that the student would do away with the visiting nurses.

(7) It was thought that the students could not give the patients good medical care.

To correct the acknowledged evil of graduating incompletely trained students and forcing them to acquire their experience later at the expense of an unsuspecting public, it was found necessary, on account of the above objections, to establish an independent institution, outside the control of any college, but open to the students of all colleges, supported by popular subscription and devoted not only to giving the best of care to really needy patients, but also to instructing physicians, students and nurses in practical obstetrics.

In this paper it will be attempted to describe briefly the system employed at the dispensary to care for the patient and instruct the student. The statistics presented in regard to the pelvis, the complications, the presentations, the operations performed, the morbidity and mortality met with, are brought before you, not because the results obtained add anything to the store of knowledge in regard to obstetrics, but to demonstrate the fact that just as

*Read before the San Francisco County Medical Society.

good results can be obtained at an obstetrical dispensary run on the academic plan as are obtained in the best maternity hospitals. I believe that this is a fact, not in spite of the student, but because of the student. Because of his watchfulness, because of his enthusiasm, because of his study and training and because of the discipline he is under, the medical student, worrying over any variation from normal, fearing to trust himself too far, reports promptly the condition of patients and carries out his instructions faithfully.

The present report considers the results obtained with the first two hundred women, who were confined, with one exception (a Cesarian section), in their own squalid homes, attended by the students and nurses of the dispensary, under the supervision of a physician.

The dispensary building serves merely for administrative purposes, containing an office, examining room, interne's room, matron's quarters and students' rooms. Here the student lives for a period of two weeks, receiving lectures on practical obstetrics, examining pregnant women, attending with a physician women in labor, and visiting women in all stages of the puerperium. The pregnant woman is first questioned carefully concerning her social and financial standing, and if considered a proper patient for the institution a medical history is taken by the junior student. This is followed by a complete physical and obstetrical examination made by a physician and the senior (second week) student, which includes a study of the breasts, abdomen, pelvis and vagina. She leaves a specimen of urine, is requested to return in a month for re-examination, and is given a card to send in when in labor.

When called, both students and a pupil nurse take to the house a kit composed of Edgar's trays which contains all the sterile dressings, drugs and instruments necessary for delivery. A physician calls during the labor to supervise the work and instruct the student. The patient is delivered on a Kelley pad surrounded with sterile towels. All examinations are made with a sterile glove, no douches are given (except for hemorrhage), the baby's eyes are treated by Crede's method, the cord is dressed with salicylic acid, and the patient given a supply of sterile pads. After labor the patient is visited every morning by the pupil nurse and every afternoon by one of the students. On the tenth day, if everything is normal and the baby gaining in weight, a complete examination is made by the physician and senior student and the patient is discharged.

Careful and complete records are kept of patients during pregnancy, parturition and the puerperium. Errors are easily recognized and corrected because the patient is seen and studied by so many different observers.

Of the first 200 hundred women confined 111 were native-born, while 86 were born in foreign countries, the nationality of three not being noted. There were 198 white women and 2 negresses; 153 multipera and 47 primipera.

In order to appreciate the results obtained it will be necessary to consider first the character of the pelvis met with, the presentations and positions, the complications encountered and the operations performed. We will consider first the

Pelvis.—The external oblique measurements have, together with the true conjugate, formed the basis for a diagnosis between a normal and a contracted pelvis. When the external oblique diameters measured between 20 and 24 cm, and the true conjugate measured over 10 cm, the pelvis has been classed as normal. With external obliques over 24 cm, the pelvis has been classed as justo-major. When the external obliques measured under 20 cm and the true conjugate was less than 10 cm, the pelvis has been classed as justo-minor. Any pelvis with a true conjugate less than 9½ cm was classed as flat. Only one irregularly shaped pelvis was met with. With the above method of classification, 92 per cent of the patients have been found to have normal or enlarged pelves, while 8 per cent had contracted pelves. Of the 15 patients having contracted pelves 4, or 26 2-3 per cent, had abnormal labors. In detail the classification is as follows: Normal, 143; justo-major, 26; justo-minor, 2; flat, 10; justo-minor flat, 2; coxalgic, 1; not measured, 16; total, 200. Rachitis was noted in 8 of the 143 normal pelves, and in 2 (one rachitic-flat and one rachitic-coxalgic) of the contracted pelves.

Presentation and Position. — The diagnosis of presentation and position has been based upon abdominal palpation, vaginal touch, a study of the mechanism during labor, and an examination of the fetal head for molding and caput. An unusually large number of abnormal presentations were met with. Only 90 per cent presented by the vertex, while over 8 per cent presented by the breech, and the remaining 2 per cent represented such unusual presentations as brow and transverse. Of the 153 vertex cases 136 were in an anterior position, 17 were in a posterior position, 95 had the occiput pointing to the left and 58 had the occiput pointing to the right. Two cases remained persistent occipito-posterior and were delivered as such over the perineum. Nine of the 14 breech cases were frank breech presentations, 8 of which were delivered as such without any serious impactions. Seven of the 200 deliveries were operative on account of the abnormal presentation or position. The following sums up completely the presentations as found:

Vertex, 153—l. o. a., 89; l. o. p., 6; r. o. p., 11; r. o. a., 47.
Brow, 2.
Breech, 14—l. s. a., 3; l. s. p., 3; r. s. p., 1; r. s. a., 7.
Transverse, 1.
Not noted, 30.
Total, 200.

Complications.—As pointed out above, the patients had about the usual number of contracted pelves, together with an unusually large number of abnormal presentations and positions. When the adverse surroundings of these patients is considered, the following comparatively small list of complica-

tions becomes more serious as affecting the prognosis. Only the more serious conditions complicating pregnancy, labor or the puerperium will be mentioned.

During pregnancy one patient had an attack of acute jaundice which caused a premature delivery. Two patients were syphilitic; one with tertiary symptoms had a premature delivery; the other, infected during pregnancy, carried her child to the full term. One patient had an attack of lobar pneumonia during the last week of pregnancy, which caused the onset of labor pains on the third day of the fever. One patient had placenta previa, which demanded an emptying of the uterus during the seventh month of pregnancy. In addition there were noted one patient with aortic regurgitation, one with an inguinal hernia, and one with uterine fibroids. In regard to the fetus, seven died in utero, one syphilitic, one a monster (chondrodystrophia-fœtalis), one placenta previa, and four from unknown causes.

During labor there were four cases of accidental hemorrhage, six cases of post-partum hemorrhage, two cases of prolapsed cord, and twenty-eight cases of asphyxia neonatorum.

During the puerperium there was one case of retained membranes, which the patient passed on the fourth day, without fever; one post-partum eclampsia, one ether pneumonia, and one case of secondary post-partum hemorrhage. In addition, three babies developed gonorrheal ophthalmia (one case followed the neglect to use silver nitrate, and in the other two cases the technic of instilling the drops was faulty), five babies had bloody vaginal discharges, two babies had distended breasts, and with two the cord became infected.

Operations.—Although the institution is a teaching institution, the percentage of operative cases is very small. The reason for this is that operations were performed only for the benefit of the mother or the child, only when definite indications were present, and never simply for the purpose of demonstrating the technic of an operation. It is the purpose of the institution to develop obstetrical judgment rather than obstetrical technic. As a result, the records are of great value to the student in showing him how many difficulties can be overcome by nature. They show him definite indications for interference and illustrate the seriousness of solving a real obstetrical problem. One hundred and seventy-four, or 87 per cent, of the patients had spontaneous deliveries, while 26, or 13 per cent, exclusive of perineorrhaphy, were operative. The following operations were performed, classed according to the indication:

For contracted pelvis—Cæsarian section, 1; high forceps, 1; partial internal cephalic version, 1; breech extraction, 1.

For abnormal presentation and position—External version, 1; partial internal podalic version, 1; partial bipolar cephalic version, 1; breech extraction, 2; low forceps, 2.

For hemorrhages—Braxton-Hicks version, 1; internal podalic version, 1; interuterine douche, 6; uterine tamponage, 1.

For uterine inertia—Manual dilatation of cervix, 8; mid forceps, 5.

For adherent membranes—Manual extraction of membranes, 3; manual extraction of placenta, 1.

Results.—It is now recognized that a large number of women can not escape local injury to the genital tract during the process of a physiological labor. And it is also recognized that formerly very few women received proper examination or repair of these injuries, at the time of labor. In the present paper the lacerations will be included in estimating the results, although a more scientific arrangement would include a comparison of the genital tract as found during pregnancy and as found ten days after labor.

(a) Lacerations. — No immediate examination or repair of the cervix was attempted, but the anterior and posterior walls of the vagina and the skin over the perineum were carefully inspected, and any break in continuity has been recorded as a laceration, although the ones involving simply the mucous membrane, where the deeper structures were firm, were not repaired. No tear involved the sphincter ani. In all there were 57 lacerations recorded, or 28½ per cent. Twenty occurred in primipera, 37 in multipera; of the 47 primipera delivered, 14, or 30 per cent, required a perineorrhaphy, while with the 153 multipera 17, or 11 per cent were repaired.

(b) Morbidity—The temperature of the mother was taken morning and evening until discharged. Of the 200 women 25 ran a temperature of 100.4 deg. Fahrenheit or more, for part of one day up to thirty-five days, making a total morbidity of 12½ per cent. The cases are as follows:

	Diagnosis.	Duration.	Highest temperature. Degrees.
1	Doubtful	2 days	100.4
2	Doubtful	3 days	101.0
3	Doubtful	1 day	102.2
4	Hot weather	1 day	100.8
5	Reaction	1 day	100.4
6	Reaction	1 day	100.8
7	Reaction	1 day	100.8
8	Reaction	1 day	101.5
9	Constipation	2 days	101.0
10	Constipation	1 day	101.1
11	Neuritis	3 days	103.0
12	Malaria	5 days	100.6
13	Ante-partum pneumonia	4 days	103.8
14	Ether pneumonia, tubercular	35 days	103.8
15	Eclampsia	1 day	101.5
16	Mastitis	1 day	100.6
17	Mastitis	5 days	100.8
18	Mastitis	1 day	101.0
19	Mastitis	1 day	101.8
20	Mastitis	4 days	102.0
21	Mastitis	6 days	103.5
22	Mastitis	2 days	103.6
23	Necrosis labia majora	10 days	103.0

24 Uterine sepsis..... 9 days....103.8
25 Uterine sepsis.....11 days....105.8

(c) Mortality—There was no maternal mortality.

The fetal mortality consisted of 9 stillbirths, and 9 babies died during the first eleven days, making a total fetal mortality of 9 per cent.

Died before labor, 7—Chondrodystrophia fœtalis, 1; ninth month, 2; seventh month (placenta previa), 1; fifth month, 1; fourth month, 1; syphilis, 1.

Died during labor (premature), 2.

Died after labor, 9—Atelectasis, first day, 3; premature (incubator), second day, 1; accidental suffocation, fourth day, 1; infected cord, general peritonitis, cerebral hemorrhage, fourth day, 1; cerebral hemorrhage, ninth day, 1; infected cord, gastro-enteritis, meningitis, tenth day, 1; acute gastro-enteritis, eleventh day, 1.

Conclusions.—From the above statistics it will be seen that 200 poor women have been confined in their own homes without a maternal death and with a fetal mortality, considering only the 191 babies alive at birth, of less than 5 per cent. A total morbidity of only 12½ per cent is exceptionally low and would be hard to equal in a good maternity hospital. To attain such results amidst adverse surroundings, with a class of patients who are underfed and under-clothed, and who are often suffering from the social diseases of the poor, such as chronic alcoholism, syphilis and gonorrhea, to carry these patients through a fairly large number of abnormal labors and protect them and their offspring from their surroundings and their diseases, is a benefit not only to the poor and a saving to the community, but, on account of the teaching and experience gained by the future practitioner, is both a benefit and a saving to the medical profession.

The San Francisco Maternity offers three interne services each year to regular graduates in medicine. The interne must devote his entire time to the dispensary for a period of four months. In return the society gives room, laundry and $35 a month, which is sufficient to cover all necessary living expenses. Applications for service beginning November 1, 1907, and March 1, 1908, are requested, and should be directed to the Medical Director, San Francisco Maternity, 1195 Valencia street, San Francisco.

A CASE OF POISONING BY SMALL DOSES OF ATROPIN.*

By HENRY WALTER GIBBONS, M.D., San Francisco.

Cases of poisoning by atropin are not very uncommon; but, as there are several points of interest in the following case, it might be of interest to report it.

On December 11th, at noon, I was called to see Mrs. S., a woman of seventy-one years, who had been suffering from bronchitis for about two weeks. She complained of cough, especially at night, accompanied by excessive secretion with a large amount of sputum and rattling in the throat.

Previous history: During early life the patient had been well, but of nervous temperament. She had three children. For a period of seven or eight years before her menopause the patient had been an invalid, suffering from dismenorrhea and probably salpingitis, and was confined to bed a good part of that time. For the last ten years, with the exception of an attack of lobar pneumonia a year ago, she has been well, though nervous. For the last year she has shown signs of failing mentally, incident with advancing age.

On examination was found a fairly well nourished old lady, quite well preserved, active, intelligent and apparently sound in mind. She had cough which was worse at night and upon rising. There was no pain. Appetite good; sleep fair, disturbed a little by cough; bowels regular; lungs negative except for a few rales heard throughout; heart negative; pulse 80, temperature 98°; abdomen negative; urine negative.

Mild laxative was prescribed, heroin and terpin hydrate and pills of atropin sulphate, gr. 1-100, one to be taken at bedtime.

On the evening of December 11th the patient took one of the atropin pills and did not have her attack of coughing upon retiring. On December 12th I saw her. She was much better and I was informed that it was not necessary to see her again. On the 14th I was called again and learned that on the evening of December 12th the patient had taken another pill, and that night had become very restless, sleepless and delirious, picking at the bed clothes, trying to get out of bed, talkative and irrational. The next day the symptoms had continued, though milder, and on that night she was given another atropin pill.

When I saw the patient on the following day she was sitting up in bed, where the attendants had great difficulty in keeping her. Her fingers were continually busy picking at the bed clothes, buttoning and unbuttoning her sack. She talked constantly in a rambling sort of way, changing from one subject to another with great rapidity. Said she felt quite well and wondered why she was kept in bed. She would pick up a fold of the bed clothes, ask what this was doing here and demand that it be removed. She thought that she was constantly surrounded by bugs, would see them running in all directions, and ask that they be taken away. She answered questions when put to her sometimes correctly. She did not realize that her actions were not normal. She recognized a daughter who lived in another town and whom she had not seen for months, but treated her coming as a matter of course and spoke to her as if she had seen her but yesterday. Her memory for recent events was very vague, but for events eight or ten years back it was exact. She lived in a sphere of her own, talking to inanimate objects as if they understood, oblivious to what went on about her except when addressed in a loud voice.

She appeared very bright and animated, her face was flushed, eyes had a fixed look, but were very bright. The pupils were very widely dilated and there was no reaction to light or accommodation. The throat and tongue were dry, voice slightly husky, and she complained of the throat being sore. She had no pain. Lungs and heart negative. Breathing 18 per min. Pulse regular, full and rate only 80. The urine was voided normally and examination of it was negative. Temperature 99.2°, which remained for three days about the same.

That night the patient was given ¼ grain morphin, hypodermically. She slept most of the night. On the following day the symptoms were just the same. More morphin was given, which quieted her for six hours, when the symptoms again returned. This condition persisted for three days more, making five days the duration of the delirium. For three days more she was slightly wandering in her speech.

*Read before the Cooper College Science Club.